

AMENDMENTS TO THE SPECIFICATION

Please substitute the following replacement paragraphs as indicated:

Please replace the paragraph on page 15, lines 3 - 11 with the following amended paragraph:

Error Detector

Fig. 6 is a block diagram of the error detector 107 of Fig. 1 according to a parity checking embodiment. As shown, a CAM word formed by one of N groups of M data bits is output from the sense amplifier bank 162. The first group of data bits is designated $D[M-1, 0]$, the second group of data bits is designated $D[(2 \times M)-1, M]$ and so forth to the final group of data bits designated $D[(N \times M)-1, (N-1) \times M]$. The CAM word also includes N parity bits, one for each group of M bits. Although N parity bits are depicted in Fig. 6, any number of parity bits per CAM word may be used in alternative embodiments. For example, a single parity bit may be used for the entire CAM word.

Please replace the paragraph on page 23, line 14 to page 24, line 6 with the following amended paragraph:

Although error detector 323 may be used to simultaneously error check a respective CAM word from each of the blocks, the provision of separate error detection circuits for each storage block increases the transistor count and complexity of the error detector implementation. In embodiments of the multiple storage block CAM device that error check one CAM word at a time, the multiple error detection circuits 329 may be omitted in favor of a single error detection circuit that is selectively coupled to the output

of each of the storage blocks 325. An error detector 348 having such an alternative arrangement is illustrated in Fig. 11. The DPV values from each of the K storage blocks are coupled to respective inputs of a multiplexer 349. Block address bits from within (or derived from) the check address 155 are supplied to a select input of the multiplexer 349 to select the DPV value from the storage block being error checked. The error detection circuit 350 then generates ~~a error~~ an error signal 357 in the manner described above, the error signal 357 being used to set the error flag signal 132 (i.e., in S-R flip flop 352 or other storage circuit) and also to signal the error address register 354 to load the check address 155 at the next CLK 104 transition. The read and reset signals (151, 153) operate as described above to advance the entries within the error address register and reset the error flag signal, respectively. Also, the error address register 354 may be a single or multi-entry register and may be implemented according to any of the different embodiments described above.

Please replace the paragraph on page 25, lines 6 - 24 with the following amended paragraph:

In the embodiment of Fig. 12, parity checking is performed one segment after another for each segment within the storage block 381, regardless of storage dimension configuration. In such an embodiment, the check address generator 383 preferably generates a check address having three components: a block address component 391 to select the storage block to be parity checked, a segment address component 393 to select the segment to be parity checked within the selected storage block, and a row address component 395 to select a row within the selected segment of the ~~selected block~~ selected

block (note that the check address may be a single value, with the block, segment and row address components being represented by selected bits within the check address).

The segment address component 393 of the check address is input to the multiplexer 382 to select the appropriate DPV value from the storage block 381. The data and parity values are supplied to a parity check circuit 396 to determine whether there is a parity mismatch. The output of the parity check circuit 396 is gated by the validity bit in AND gate 398 to produce a block parity error signal 401. The block parity error signal 401 may then be logically ORed with block parity error signals from other blocks to produce a global parity error signal as shown in Fig. 10. Also, though not shown in Fig. 12, the multiplexer 382 may be extended (or a second multiplexer provided) to allow selection of a DPV value from a selected segment (indicated by the segment address component of the parity address) from a selected block (indicated by the block address component of the parity address) for input to a single error detection circuit as shown in Fig. 11.

Please replace the paragraph on page 30, lines 15 - 18 with the following amended paragraph:

Although a self-invalidation operation has been described, the instruction decoder 443 of Fig. 14 may also invalidate a corrupted CAM word in response to an explicit host instruction. In that case, the sequence of operations ~~may similar~~ may be similar to those shown in Fig. 17 (i.e., blocks 481 and 483) followed by a signal to the error detector 455 to reset the error flag 132.